UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,286	01/27/2006	Dong Hwal Lee	KTSHIN.009APC	5514

20995 7590 12/26/2008

KNOBBE MARTENS OLSON & BEAR LLP
2040 MAIN STREET
FOURTEENTH FLOOR
IRVINE, CA 92614

EXAMINER	
BOR, HELENE CATHERINE	

ART UNIT	PAPER NUMBER
3768	

NOTIFICATION DATE	DELIVERY MODE
12/26/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcartee@kmob.com
eOAPilot@kmob.com

Office Action Summary	Application No.	Applicant(s)	
	10/566,286	LEE ET AL.	
	Examiner	Art Unit	
	HELENE BOR	3768	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2 and 5-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2 and 5-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 November 2007* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/12/2008 has been entered.

Claim Rejections - 35 USC § 102

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claim 1-2 & 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Leszcynski (US Patent No. 5,157,639).

Claim 1-2 & 9: Leszcynski teaches a distance measurement method using ultrasonic (Abstract). Leszcynski teaches transmitting, from a transmitter, an ultrasonic pulse having specific frequencies and receiving, at a receiver, the ultrasonic pulse (Abstract). Leszcynski teaches amplifying the ultrasonic pulse and extracting a specific frequency of the amplified ultrasonic pulse to find an arrival time of a pulse and converting the arrival time into a distance (Col. 7, Line 61 – Col. 8, Line 11). Leszcynski teaches amplifying the received ultrasonic pulse to generate an amplified signal (Figure 2, Element 90) and filtering the amplified signal (Figure 2, Element 110). Leszcynski teaches that filtering the amplified signal to generate a filtered signal in which an

unnecessary frequency of the amplified signal is removed or weakened (Figure 2, Element 110). Leszcynski teaches amplifying the filtered signal again to generate a re-amplified signal (Figure 2, Element 100 [amplifier filter]). Leszcynski teaches converting the re-amplified signal into a digital signal (Figure 2, Element 114) and extracting the specific frequency from the converted digital signal through a digital signal processing (Figure 2, Element 40, Abstract & Col. 9, Line 39-46 & 59-64).

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1 and 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi (US Patent Application No. 2004/0021566 A1), and further in view of Leszczynski (US Patent No. 5,157,639).

6. **Claim 6 & 1 and 5:** Hayashi teaches distance measurement method using ultrasonic (abstract). Hayashi teaches installing a first receiver for receiving an ultrasonic at a known position (Figure 17, Element 31a). Hayashi teaches installing a second receiver for receiving an ultrasonic at an object to be measured (Figure 17, Element 31b). Hayashi teaches transmitting an ultrasonic having a specific frequency from a location where a distance from the object will be measured, to the first and second receivers (Page 11, Para 172-173). Hayashi teaches extracting specific frequencies of the ultrasonic received from the first and second receivers to find an arrival time of a first signal and converting the time into a distance (Page 11, Para 168-169). Hayashi teaches transmitting error information related to a difference between the

distance received by the first receiver and the known distance to the second receiver; and allowing the second receiver to correct the velocity of sound using the error information (Page 11, Para 178-179 & Page 12, Para 0194). Hayashi fails to teach the specific signal processing, however, Leszczynski teaches the signal processing as explain in the rejection above. It would have been obvious to one of ordinary skill in the art to modify the system of Hayashi to include the signal processing as taught by Leszczynski for a more precise time of arrival of echoes (Col. 2, Line 55-60).

Claim 7-8: Hayashi teaches a distance measurement device using ultrasonic (Abstract). Hayashi teaches a transmitter configured to generate and transmit an ultrasonic having a specific frequency (Figure 21, Element 23). Hayashi teaches a sensor for configured to receive the ultrasonic reflected from an object (Figure 21, Element 33). Hayashi teaches a digital signal processor configured to process the digital data stored in the memory (Figure 21, Element 32). Hayashi teaches an output unit (Figure 20, Element 3a) configured to display results processed in the digital signal processor. Hayashi teaches a numerical input unit configured to inform the digital signal processor of a processing condition (Figure 20, Element 3a). Hayashi teaches a communication unit (Figure 20, Element 2) configured to connect the digital signal processor (Figure 21, Element 32) and an external apparatus (Figure 20, Element 12) to each other so that the digital signal processor and the external apparatus can exchange information. Hayashi teaches a transmission time of a first signal among the received ultrasonic and a delayed time of the first signal is measured based on the transmission time and an arrival time of the first signal calculated in the digital signal processor are

measured (Page 12, Para 0193-194). Hayashi fails to teach the details of amplifying and filtering of the signal, however, Leszczynski teaches the signal processing as explain in the rejection above. It would have been obvious to one of ordinary skill in the art to modify the system of Hayashi to include the signal processing as taught by Leszczynski for a more precise time of arrival of echoes (Col. 2, Line 55-60).

Response to Arguments

7. Applicant's arguments with respect to claim 1-6 have been considered but are moot in view of the new ground(s) of rejection.

8. Applicant's arguments filed 12/12/2008 with respect to claims 7-8 have been fully considered but they are not persuasive. The Applicant submitted the argument that the transmission time of Hayashi is different than the transmission time of the Applicant. The Examiner notes that currently no structural limitation of the device of Claim 7 would differentiate the system of Hayashi from the system of the Applicant. Unless the limitation is positively claimed either in conjunction with transmitter being configured for the limitation or positively claiming the digital signal processor configured for the limitation, the prior art is only required to be capable of. The prior art is capable of sending transmission times [similar to transmitted IDs] and has time stamp [Time Computation] capabilities (Figure 23, ID Signal & 37).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HELENE BOR whose telephone number is (571)272-2947. The examiner can normally be reached on M-T 8:30am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long V. Le can be reached on (571)272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. B./
Examiner, Art Unit 3768

/Eric F Winakur/
Primary Examiner, Art Unit 3768